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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,766	10/01/2003	Michael K. Schumacher	84,355-005	7912

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EXAMINER

BATAILLE, PIERRE MICHE

ART UNIT PAPER NUMBER

2186

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/676,766	<b>Applicant(s)</b> SCHUMACHER, MICHAEL K.	
	<b>Examiner</b> Pierre-Michel Bataille	<b>Art Unit</b> 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is taken in response to Applicant's communication filed 09 June 2006 responding to Non-Final Rejection dated March 10, 2006. Applicant's amendments and/or arguments have been considered with the results that follow. Claims 1-36 are pending in the application under prosecution.

#### ***Response to Arguments***

2. Applicant's arguments filed 09 June 2006 with respect to claims 1-36 have been fully considered but they are not persuasive for at least the following remarks.

Rejection under 35 U.S.C. 101 with respect to claim 13 is withdrawn in view of amendment to the claim. However, the rejection under 35 U.S.C. 101 with respect to claims 16-25 is maintained. The result of performing the steps of claim 16 is determining something without either using what is executing instructions determined in a disclosed practical application nor making the result available for use in the disclosed practical application (. i.e., the claim fails to specifically disclose the programming instructions are stored in a practical and tangible medium). As such, it does not appear to produce a tangible result.

The Office Action rejected the claims in view of US 2004/0078540 (Cirne et al). Applicant argues that an increase in the number of objects does not specifically correspond to an increase in memory consumption. To the contrary, the applied

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reference by Cirne discloses monitoring method for potential sources of memory leaks involving determining whether group of stored items is potential memory leak source based on change in size of group of stored items. The noted memory items are STORED memory items and the change in size is determined by tracking the size of the group of STORED items. There is no reason of mentioning memory leak without taking addressable memory into account. Cirne even suggests that a developer can sufficiently build a leak detecting sweep and finds that the address space grows unacceptably due to one or more leaks.

Cirne discloses the method of detecting memory leakage for JAVA virtual machine application executing on a computer by looking for and flagging collections that appear to be growing in size and reporting a flagged collection which no longer appears to be leaking and identifying potential sources of memory leaks by tracking growth patterns of groups of stored items before a time-out period expires. Cirne discloses creating an entry log for collection being potential source of a leak; the entry in the log file created includes the following information: current timestamp when written to the log, an identification (ID) for the collection, the class of the collection, the allocation time of the collection, allocation stack trace for the collection, current size of the collection. General metrics and metrics for each suspicious collection are created to include: a total number of tracked collections, the total number of potential leaks, and the allocation rate of collections, the class of the collection, the allocation time of the collection, allocation

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stack trace of the collection, the current size of the collection, and an indication if the collection is currently deemed to be a potential source of a memory leak.

For these arguments, the rejection is maintained and repeated below.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 13: the claimed invention lacks patentable utility. The limitation “performance of said method” is simply an abstract idea. It would be impossible to one of ordinary skill in the art to determine the performance of said method.

Claim 16-25: the claimed invention is directed to non-statutory subject matter. “A program is non-patentable unless specifically stating “instructions stored on a tangible medium and executable by a machine”.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by US 2004/0078540 (Cirne et al).

With respect to claims 1, 16, and 26, Cirne discloses the method of detecting memory leakage for JAVA virtual machine application executing on a computer, as claimed (**see Paragraphs 0015-0019**), comprising:

(A) monitoring allocated memory levels and filtering out increases in peak allocated memory levels not indicative of a memory leak associated with said program (**looking for and flagging collections that appear to be growing in size and reporting a flagged collection which no longer appears to be leaking**);

(B) determining a memory leakage rate when a peak allocated memory level has increased a determined number of times (**identifying potential sources of memory leaks by tracking growth patterns of groups of stored items before a time-out period expires**);

(C) producing an alarm response when the determined leakage rate exceeds a pre-selected level (**collection reported if the growth pattern of a collection indicates that it may be the source of a memory leak**) (**see Paragraphs 0015-0019**).

With respect to claims 2-8, Cirne discloses the method of: determining when a peak allocated memory level has increased a determined number of

times is performed during a determined time interval (***time-out period set for monitoring growth pattern, Par. 0017***).

With respect to claims 3, Cirne discloses filtering out increases in peak allocated memory levels not indicative of a memory leak associated with said program (***reporting a flagged collection which no longer appears to be leaking; Par. 0017***).

With respect to claims 4, Cirne discloses ignoring increases in peak allocated memory levels during a startup time interval immediately after said program begins to execute (***discontinuing track of newly allocated collections if no longer appear to be leaking; Par. 0016-0017***).

With respect to claims 5, Cirne discloses ignoring increases in peak allocated memory levels that occur less than a pre-selected time apart, which may be indicative of normal memory allocation activity (***reclassifying stored group which appears not to a leaking; Par. 0019***).

With respect to claims 6-8, Cirne discloses determining a memory leakage rate when the peak allocated memory level has increased said determined number of times during a determined time interval (***tracking collection as metric data and reporting the tracking of group of stored items reported as***

***being a potential source of a memory leak if the received size satisfies the current value of a threshold; Par. 0016, 0019).***

With respect to claims 11-12, Cirne discloses recording the response and generating an alarm signal when the leakage rate exceeds a pre-selected level ***(tracking collection as metric data and reporting the tracking of group of stored items reported as being a potential source of a memory leak if the received size satisfies the current value of a threshold; Par. 0016, 0019).***

With respect to claims 17-21, Cirne discloses the invention as claimed, determining memory leakage during a predetermined time interval, executing Java virtual machine application program on a first computer, the computer being part of a network system, said program being executed in part on a second computer ***(Fig. 2; Par. 0033).***

With respect to claims 9-10, 22-25, and 33-34, Cirne discloses selecting at least one operating parameter from the group including said determined number of times of peak allocated memory level increases, said determined time interval, said pre-selected level of said memory leakage rate, a sampling rate at which said monitoring step is performed, a startup time interval in which increases in peak allocated memory levels are filtered out, a time delay between increases in the peak allocated memory levels for which such increases are ignored as to said determined number of times the peak allocated memory level has increased, and



said response; and providing an interface for said second computer program that allows a user to specify a value for said at least one operating parameter; configuring said interface so as to allow a user to specify a plurality of values for a corresponding plurality of said operating parameters (*Par. 0032-0035*).

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (571) 272-4178. The examiner can normally be reached on Mon-Fri (8:00A to 4:30P).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Pierre-Michel Bataille  
Primary Examiner  
Art Unit 2186

July 21, 2006

**PIERRE BATAILLE**  
**PRIMARY EXAMINER**